

**WHAT IS CLAIMED IS:**

1           1. A switch for a telecommunications network, said switch comprising:  
2           a call processing application, said call processing application handling  
3           interactions with originating and terminating agents in accordance with an  
4           interaction framework;

5           a switch reprovisioning system coupled to said call processing  
6           application, said switch reprovisioning system reprovisioning said call  
7           processing application for said interactions with said originating and  
8           terminating agents;

9           a user interface coupled to said switch reprovisioning system, said user  
10          interface configured for receiving voice commands, issued by a switch  
11          administrator, for transmission to said switch reprovisioning system and  
12          generating audibilized responses, issued by said switch reprovisioning system,  
13          for transmission to said switch administrator.

1           2. The switch of claim 1 wherein said switch further comprises:

2           an interaction application coupled to said switch reprovisioning system  
3           and said call processing application, said interaction application constructing  
4           said interaction framework for said call processing application; and

5           at least one provisioning table which contains a plurality of provisioning  
6           instructions suitable for use by said call processing application;

7           said interaction application receiving at least one voice command from  
8           said user interface and reprovisioning said switch by modifying, using selected  
9           ones of said plurality of instructions maintained in said provisioning table, said  
10          interaction framework for said call processing application.

11           3. The switch of claim 2 wherein said switch reprovisioning system  
12    A further comprises:  
13           a voice recognition application coupled between said user interface and  
14    said interaction application; and  
15           a recognizable audible input table coupled to said voice recognition  
16    application, said recognizable audible input table maintaining a plurality of  
17    recognizable provisioning instructions suitable for use, by said interaction  
18    module, to modify said interaction framework used by said call processing  
19    application;  
20           said voice recognition application configured for detecting audible  
21    sounds, determining if said detected audible sounds corresponds to any of said  
22    recognizable instructions maintained in said recognizable audible input table  
23    and issuing, to said interaction application, said recognizable provisioning  
24    instructions corresponding to said detected audible sounds;  
25           said interaction application reprovisioning said switch by modifying said  
26    interaction framework using said issued provisioning instructions.

1           A 4. The switch of claim 3 wherein said provisioning instructions  
2    maintained in said recognizable audible input table includes resource  
3    provisioning information for use in modifying interactions between said switch  
4    and originating agents.

1           5. The switch of claim 3 wherein said provisioning instructions  
2 maintained in said recognizable audible input table includes interaction  
3 A provisioning information for use in modifying interactions between said switch  
4 and originating agents for collecting information related to call set-up and call  
5 routing.

1           6. The switch of claim 3 wherein said provisioning instructions  
2 B maintained in said recognizable audible input table includes subscriber  
3 provisioning information for use in modifying interactions between said switch  
4 and originating agents for collecting information related to subscriber  
5 authorization.

1 A           7. The switch of claim 3 wherein said provisioning instructions  
2 maintained in said recognizable audible input table includes translations  
3 provisioning information for use in modifying interactions between said switch  
4 and said terminating agents.

1           8. The switch of claim 3 wherein said reprovisioning system further  
2 comprises:

3     A           a voice generation application coupled between said user interface and  
4 said voice recognition application; and

5           an output audibilization table coupled to said voice generation  
6 application, said output audibilization table maintaining a plurality of  
7 audibilizations for use, by said voice generation application, to generate  
8 audible messages for transmission to said user interface in response to receipt  
9 of replies issued by said interaction module in response to said provisioning  
10 instructions issued by said voice recognition application.

1           9. The switch of claim 8 herein said user interface further comprises:

2     B           an audio input device for detecting audible sounds;

3           an A/D converter having an input coupled to said audio input device and  
4 an output coupled to said voice recognition application, said A/D converter  
5 converting audible sounds received from said audio input device into digitized  
6 signals for transmission to said voice recognition application;

7           an audio output device for generating audible sounds; and

8           a D/A converter having an input coupled to said voice generation  
9 application and an output coupled to said audio output device, said D/A  
10 converter converting digitized signals received from said voice generation  
11 application into audible sounds for transmission to said audio output device.

1           10. A switch for a telecommunications network, said switch comprising:  
2           at least one hardware-based component;  
3           at least one software-based component;  
4           a switch monitoring system coupled to each of said at least one  
5           hardware-based component of said switch and to each one of said at least one  
6           software-based component of said switch;  
7           said switch monitoring system receiving operational information from  
8           said at least one hardware-based component and said at least one software-  
9           based component and issuing, based upon said received operational  
10          information, a selected one of a plurality of instructions, at least one of said  
11          plurality of instructions being an instruction to issue a specified audible  
12          notification;  
13          a voice generation application coupled to said switch monitoring system,  
14          said voice generation application receiving said selected instruction from said  
15          switch monitoring system if said selected instruction is an instruction to issue  
16          an audible notification, generating a digitized message corresponding to said  
17          audible notification; and  
18          a user interface coupled to said voice generation application, said user  
19          interface configured for receiving said digitized message issued by said voice  
20          generation application and converting said received digitized message into  
21          audible sound.

1           11. The switch of claim 10 wherein said switch monitoring system  
2 further comprises:  
3           an expert system application coupled to each one of said at least one  
4 hardware-based switch component and said at least one software-based switch  
5 component; and  
6           a rules table coupled to said expert system application, said rules table  
7 containing information governing operation of said switch;  
8           said expert system application receiving operational information from  
9 said at least one hardware-based component and said at least one software-  
10 based component, issuing, based upon said received operational information  
11 and said information contained in said rules table, said selected one of said  
12 plurality of instructions.

1           12. The switch of claim 10 wherein said switch monitoring system  
2 further comprises:  
3           an expert system application coupled to each one of said at least one  
4 hardware-based switch component and said at least one software-based switch  
5 component; and  
6           a rules table coupled to said expert system application, said rules table  
7 containing information governing operation of said switch, said rules table  
8 contains a plurality of operating conditions, at least one instruction associated  
9 with each operating condition and a numerical value assigned thereto;  
10          said expert system application receiving operational information from  
11 said at least one hardware-based component and said at least one software-  
12 based component, employing fuzzy logic to rank said at least one instruction  
13 contained in said rules table, and initiating a highest ranked one of said at  
14 least one instruction.

1           13. The switch of claim 10 wherein said switch monitoring system  
2 further comprises:  
3           an expert system application coupled to each one of said at least one  
4 hardware-based switch component and said at least one software-based switch  
5 component; and  
6           a rules table coupled to said expert system application, said rules table  
7 containing a set of rules governing operation of said switch, each one of said  
8 set of rules comprised of a first portion containing an operating condition for  
9 said switch and a second portion containing an instruction to be taken if said  
10 operating condition contained in said first portion is met.  
11           said expert system application receiving operational information from  
12 said at least one hardware-based component and said at least one software-  
13 based component, and issuing, based upon said received operational  
14 information and said information contained in said rules table, said selected  
15 one of said plurality of instructions.



1           14. The switch of claim 13 wherein said switch monitoring system  
2 further comprises:  
3           an output audibilization table coupled to said voice generation  
4 application, said output audibilization table maintaining a plurality of digitized  
5 messages, each corresponding to one of said instructions to issue an audible  
6 notification, for use, by said expert system, to generate audible messages for  
7 transmission to said user interface.

1           15. The switch of claim 14 wherein said user interface further  
2 comprises:  
3           an audio output device for receive analog signals and generating audible  
4 sounds therefrom; and  
5           a D/A converter having an input coupled to said voice generation  
6 application and an output coupled to said audio output device, said D/A  
7 converter converting digitized signals received from said voice generation  
8 application into analog signals for transmission to said audio output device.

1           16. The switch of claim 13 and further comprising:  
2           a call processing application, said call processing application handling  
3 interactions with originating and terminating agents in accordance with an  
4 interaction framework;  
5           an interaction application coupled to said call processing application,  
6 said interaction application constructing said interaction framework for said  
7 call processing application; and  
8           at least one provisioning table coupled to said call processing  
9 application, each of said at least one provisioning table containing a plurality  
10 of instructions suitable for use by said call processing application;  
11           said interaction application modifying, using selected ones of said  
12 plurality of instructions maintained in said provisioning table, said interaction  
13 framework for said call processing application.

1           17. The switch of claim 16 and further wherein the switch monitoring  
2 system further is a combination switch provisioning/monitoring system, said  
3 combination switch provisioning/monitoring system further comprising:

4           a provisioning system coupled to said call processing application,  
5 said provisioning system provisioning said call processing application for said  
6 interactions with said originating and terminating agents;

7           said human interface configured for receiving voice commands, issued  
8 by a switch administrator, for transmission to said provisioning system and  
9 transmitting responses, issued by said provisioning system, for transmission to  
10 said switch administrator;

11           a voice recognition application coupled between said human interface  
12 and said interaction application; and

13           a recognizable audible input table coupled to said voice recognition  
14 application, said recognizable audible input table maintaining a plurality of  
15 recognizable instructions suitable for use, by said interaction module, to  
16 modify said interaction framework used by said call processing application;

17           said voice recognition application configuring for detecting audible  
18 sounds, determining if said detected audible sounds corresponds to any of said  
19 recognizable instructions maintained in said recognizable audible input table  
20 and issuing, to said interaction application, said recognizable instructions  
21 corresponding to said detected audible sounds;

22           said interaction application modifying said interaction framework using  
23 said issued instructions.

1           18. The switch of claim 17 wherein said provisioning system further  
2 comprises:

3           a voice generation application coupled between said human interface  
4 and said interaction application; and

5           an output audibilization table coupled to said voice generation  
6 application, said output audibilization table maintaining a plurality of  
7 audibilizations for use, by said interaction application, to generate audible  
8 messages for transmission to said human interface.

1           19. The switch of claim 18 wherein said voice generation application is  
2 also coupled to said voice recognition module, said output audibilization table  
3 further maintaining a plurality of audibilizations for use , by said voice  
4 recognition application, to generate audible messages to said human interface.

1           20. The switch of claim 19 wherein said human interface further  
2 comprises:

3           an audio input device for detecting audible sounds;

4           an A/D converter having an input coupled to said audio input device and  
5 an output coupled to said voice recognition module, said A/D converter  
6 converting audible sounds received from said audio input device into digitized  
7 signals for transmission to said voice recognition module;

8           an audio output device for generating audible sounds; and

9           a D/A converter having an input coupled to said voice generation module  
10 and an output coupled to said audio output device, said D/A converter  
11 converting digitized signals received from said voice generation module into  
12 audible sounds for transmission to said audio output device.

1           21. A method for reprovisioning a switch, comprising the steps of  
2 detecting an audible sound;

3           determining if said audible sound is an audibilized command containing  
4 a reprovisioning instruction; and

5           if said audible sound is an audibilized command containing a  
6 reprovisioning instruction, reprovisioning said switch in accordance with said  
7 reprovisioning instruction.

1           22. The method of claim 21 wherein the step of determining if said  
2 audible sound is an audibilized command containing a reprovisioning  
3 instruction further comprises the steps of:  
4           digitizing said audible sound;  
5           comparing said digitized audible sound with a plurality of recognizable  
6 commands;  
7           if said digitized audible sound matches one of said recognizable  
8 commands, executing a reprovisioning instruction contained in said digitized  
9 audible sound.

1           A       23. The method of claim 22 wherein the steps of detecting an audible  
2 sound and determining if said audible sound is an audibilized command  
3 containing a reprovisioning instruction further comprises the steps of:  
4           detecting a first audible sound;  
5           upon detecting said first audible sound, issuing a request for an  
6 authorization code;  
7           detecting a second audible sound;  
8           determining if said second audible sound is said requested authorization  
9 code;  
10          if said second audible sound is said requested authorization code,  
11 detecting a third audible sound; and  
12          determining if said third audible sound is an audibilized command  
13 containing a reprovisioning instruction.